AMENDMENT

Kindly amend the application, without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents.

IN THE CLAIMS:

Kindly amend the claims, without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents, to read as follows:

1-28. (Cancelled)

29. (Previously Presented) A method of depositing material on a substrate, comprising the steps of:

delivering from a first outlet a stream of droplets of a precursor liquid towards a substrate;

applying an electric field between the first outlet and the substrate; and

delivering from a second outlet a flow of fuel about the stream of droplets such as to provide an annular flame combustion region between the first outlet and the substrate through which at least a portion of the stream of droplets passes before reaching the substrate, whereby the precursor liquid is chemically reacted, or decomposed, or chemically reacted and decomposed, to provide the deposited material.

30. (Previously Presented) The method according to claim 29, wherein the chemical reaction, or the decomposition, or the chemical reaction and decomposition, occurs in a higher temperature overlap zone between the stream of droplets and the annular flame combustion region.

31. (Previously Presented) The method according to claim 29, wherein the flow of fuel is a diverging flow.

32. (Previously Presented) The method according to claim 29, wherein the first and second outlets are coaxial.

33. (Previously Presented) The method according to claim 29, wherein the stream of droplets is provided as a diverging spray.

34. (Previously Presented) The method according to claim 29, further comprising the step of:
delivering a flow of cold gas in a direction from the first outlet towards the substrate.

35. (Previously Presented) The method according to claim 34, wherein the flow of cold gas is delivered from a third outlet as a flow about the stream of droplets and within the flow of fuel.

36. (Previously Presented) The method according to claim 35, wherein the first and third outlets are coaxial.

37. (Previously Presented) The method according to claim 29, wherein the material is a ceramic material.

38. (Previously Presented) The method according to claim 29, wherein the material is a multicomponent oxide material.

39. (Previously Presented) The method according to claim 29, further comprising the step of:
heating the substrate.

40. (Previously Presented) The method according to claim 29, wherein the precursor liquid is a sol precursor solution.

41. (Previously Presented) The method according to claim 29, further comprising the step of:

moving one or both of the substrate and the first outlet during deposition so as to deposit a three-dimensional structure as a series of overlying layers.

42. (Previously Presented) The method according to claim 29, further comprising the step of:

controlling a region of deposition by varying one or more of a rate of flow of the fuel, a separation between the first outlet and the substrate and the electric field between the first outlet and the substrate.

43. (Previously Presented) The method according to claim 29, wherein the material is deposited as a powder and the chemical reaction, or the decomposition, or the chemical reaction and decompostion, occurs away from the substrate.

44. (Previously Presented) The method according to claim 29, wherein the material is deposited as a solid film and the chemical reaction, or the decomposition, or the chemical reaction and decomposition, occurs in the vicinity of the substrate.

45. (Previously Presented) An apparatus for depositing material on a substrate, comprising:

a nozzle assembly including a first outlet from which a stream of droplets of a precursor liquid is in use delivered to a substrate, and a second outlet from which a flow of fuel is in use delivered such as to provide an annular flame combustion region through which at least a portion of the stream of droplets in use passes before reaching the substrate;

a precursor supply for supplying a precursor liquid to the nozzle assembly;

an electrical supply for applying an electric field between the first outlet and the substrate; and

a burner for generating the flame of the annular flame combustion region between the first outlet and the substrate;

whereby the precursor liquid is chemically reacted, or decomposed, or chemically reacted and decomposed, in the annular flame combustion region to provide the deposited material.

46. (Previously Presented) The apparatus according to claim 45, wherein the chemical reaction, or the decomposition, or the chemical reaction and decompostition, occurs in a higher temperature overlap zone between the stream of droplets and the annular flame combustion region.

47. (Previously Presented) The apparatus according to claim 45, wherein the first and second outlets are coaxial.

48. (Previously Presented) The apparatus according to claim 45, wherein the nozzle assembly further comprises a third outlet disposed between the first and second outlets from which a flow of cold gas is in use delivered.

49. (Previously Presented) The apparatus according to claim 48, wherein the first and third outlets are coaxial.

50. (Previously Presented) The apparatus according to claim 45, wherein the first outlet is a central outlet.

51. (Currently Amended) An apparatus for depositing material on a substrate, comprising:

a nozzle assembly including a first outlet from which a stream of droplets of a precursor liquid is in use delivered to a substrate, and a second outlet from which a flow of fuel is in use delivered such as to provide an annular flame combustion region through which at least a portion of the stream of droplets in use passes before reaching the substrate; ~~The apparatus according to claim 45, further comprising:~~

a mesh disposed between the first outlet and the substrate;~~.~~

a precursor supply for supplying a precursor liquid to the nozzle assembly;

an electrical supply for applying an electric field between the first outlet and the substrate; and

a burner for generating the flame of the annular flame combustion region between the first outlet and the substrate;

whereby the precursor liquid is chemically reacted, or decomposed, or chemically reacted and decomposed, in the annular flame combustion region to provide the deposited material.

52. (Previously Presented) The apparatus according to claim 45, further comprising:

an electrode at an electric potential between the potential of the first outlet and the substrate and disposed between the first outlet and the substrate.

53. (Previously Presented) The apparatus according to claim 52, wherein the electrode is an annular electrode.

54. (Previously Presented) The apparatus according to claim 45, further comprising:

a positioner for altering the relative position of the first outlet and the substrate.

55. (Previously Presented) The apparatus according to claim 45, where configured such that the chemical reaction, or the decomposition, or the chemical reaction and decomposition, occurs away from the substrate so as to provide the material as a powder.

56. (Previously Presented) The apparatus according to claim 45, where configured such that the chemical reaction, or the decomposition, or the chemical reaction and decomposition, occurs in the vicinity of the substrate so as to provide the material as a solid film.